## AMENDMENTS TO THE SPECIFICATION

**Page 1, 1ˢᵗ paragraph:**

This application is based on Application No. 2000-363014, filed in Japan on November 11, 2000, the contents of which are hereby incorporated by reference. This application is also a divisional of parent Application No. 09/870,795 filed June 1, 2001; the disclosure of which is incorporated herein by reference.

**Page 11, please delete the last full paragraph**

**Paragraph bridging pages 11 and 12:**

Fig. 9(b)9 is a flow chart for explaining the details of the "vehicle tracking processing" according to the present invention.

**Page 12, please delete the 1ˢᵗ full paragraph**

**Page 11, 2ⁿᵈ full paragraph:**

Fig. 10(b)10 is a flow chart for explaining the details of the "moving vehicle detection processing" according to the present invention.

**Paragraph bridging page 23 and page 24:**

In step 606, the distance image obtained in steps 603 through 605 is projected to the X axis to form a histogram Xproj (m), as illustrated in Fig. 13. As the histogram is prepared in this manner, when the laser radar 100 is detectingddetecting a side wall on a straight line road for instance, the detection points data, detecting the side wall, become a group of detection points arranged in the longitudinal direction, and hence, when seeing the distance image corresponding to the group of detection points in a histogram in which the distance image is projected to the X axis, a peak comes out at a side or lateral position X in which the side wall exists. Then, in

subsequent steps 607 through 611, mesh No. m containing a piece of detection points data is

calculated according to equation (6) for each piece of detection points data, and if the value of

Xproj (m) indicated at "m" is equal to or greater than a prescribed value, this piece of detection

points data is assumed to be one of the detection points data which are arranged in the

longitudinal direction, and hence it is determined as column detection points data. On the other

hand, if the value of Xproj (m) is less than the prescribed value, it is determined that this piece of

detection points data is not column detection points data.

**Paragraph bridging page 26 and page 27:**

Reference will now be made to the details of the "vehicle tracking processing" in step 206

by the use of Fig. ~~9(a) and Fig. 9(b)~~9. First, in step 801, it is ascertained whether or not there is

the vehicle data which succeeded in detecting a vehicle according to the last "moving vehicle

detection processing" or according to the last "stop vehicle detection processing", or in tracking a

vehicle according to the last "vehicle tracking processing". When there exists no vehicle which

was successfully detected or tracked at the last time, this processing is ended or passed through.

On the other hand, when there exists a vehicle which was successfully detected or tracked at the

last time, the control process proceeds to step 802 where "i" is set to zero (i.e., i = 0), and then to

step 803 where the position of the recognized vehicle of No. i (i-th vehicle) to be detected at this

time is estimated by the use of the following equations (12) and (13).

**Paragraph bridging page 28 and page 29:**

In step 813, it is determined whether the above operations have been done for all the

recognized vehicles which were detected or successfully tracked at the last time, and when all the

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last recognized vehicles have been processed, the control process proceeds to step 814. In step

[[714]]814, the data registrations of the recognized vehicles of which the number of lost times

Nlosti is two or more are deleted, and the "vehicle tracking processing" is ended.

**Page 29, 1st full paragraph:**

Next, reference will be made to the details of the "moving vehicle detection processing"

in step 207 by using Fig. 10(a) and Fig. 10(b)10. First, in step 901, the current detection points

data are developed into a two-dimensional array Image 3 (m, n). Specifically, for those of all the

current detection points data (Xi(0), Yi(0)) which were determined to be moving detection points

data, but not column detection points data and not the curved road detection points data

according to the processings in steps 203 through 205, mesh numbers (m, n) corresponding to the

respective pieces of detection points data are determined by means of the following equations

(17) and (18), and their corresponding Image 3 (m, n) is set to "1". In this embodiment, $\Delta X$ is

set to 0.25 m, and $\Delta Y$ is set to 2 m.

## AMENDMENTS TO THE DRAWINGS

Please replace Figure 2 as filed with the attachment. An annotated marked-up drawing is

attached for the Examiner's convenience, along with a formal replacement sheet.

Attachment:    Annotated Marked-Up Drawing (Fig. 2)
               Replacement Sheet (Fig. 2)